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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/016,699

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Di-An Hong

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01/28/2004

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EXAMINER

FOULADI SEMNANI, FARANAK

ART UNIT

PAPER NUMBER

2672

DATE MAILED: 01/28/2004

6

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/016,699

Applicant(s)

HONG ET AL.

Examiner

Faranak Fouladi

Art Unit

2672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_ 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This action is responsive to communications: application, filed on 12/10/01; IDS, filed on 04/26/02; IDS, filed on 04/01/03; Amendment A, filed on 10/20/03.
2. Claims 1-22 are pending in the case, with claims 1, 14, 18 and 21 being independent.
3. The present title of the application is "Method and apparatus for biometric control of display indicator" (as originally filed).
4. **THIS ACTION IS MADE FINAL.**

### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Woods et al. US Patent 6,413,190 B1, hereafter Woods.
7. Regarding independent claim 1, "a method for manipulating an on-screen cursor comprising:

sensing first electromyogram signals; *[Woods disclose in col. 6 lines 62-63]*

sensing second electromyogram signals; *[Woods disclose in col. 6 lines 64-65]*

in response to sensing at least some of the first electromyogram signals, establishing an angle of directional movement for the on-screen cursor; *[Woods disclose in col. 7 lines 24-28]*

in response to sensing at least some of the second electromyogram signals, moving the on-screen cursor in a previously determined direction.”  
*[Woods disclose in col. 7 lines 24-28 and col. 8 lines 25-29].*

Wood has disclosed in his invention to move and control an on-screen cursor based on muscle contraction data obtained by using (3 or less) body sensors. Wood disclose in col.8 lines 26-30 that the direction and movement of the on screen cursor is based and controlled by two different body parts (through muscles) which each body part having a different sensor.

8. Regarding dependent claim 2, “the method of claim 1 wherein sensing first electromyogram signals includes sensing first electromyogram signals from at least a first muscle and wherein sensing the second electromyogram signals includes sensing second electromyogram signals from at least a second muscle, which second muscle is different from the first muscle.” *Woods disclose in col. 6 lines 62-65 and col.8 lines 26-30 and in Fig. 2.*

9. Regarding dependent claim 3, "the method of claim 1 wherein establishing an angle of directional movement for the on-screen cursor includes rotating an onscreen directional indicator that corresponds to the angle of directional movement." *Woods disclose in col. 8 lines 30-34.*

10. Regarding dependent claim 4, "the method of claim 3 wherein rotating an on-screen directional indicator that corresponds to the angle of directional movement includes rotating the on-screen cursor." *Woods disclose in col. 8 lines 30-34.*

11. Regarding dependent claim 5, "the method of claim 1 and further comprising wirelessly transmitting information signals that at least correspond to the first and second electromyogram signals." *Woods disclose in col. 15 lines 15-18.*

12. Regarding dependent claim 6, "the method of claim 1 and further comprising wirelessly transmitting information signals that at least correspond to the angle of directional movement for the on-screen cursor and movement of the on screen cursor in a previously determined direction." *Woods disclose in col. 15 lines 28-31.*

13. Regarding dependent claim 7, "the method of claim 1 and further comprising processing the first and second electromyogram signals to at least level shift the first and second electromyogram signals." *Woods disclose in col. 3 lines 55-65.*

14. Regarding dependent claim 8, "the method of claim 1 and further comprising processing the first and second electromyogram signals to at least scale the first and second electromyogram signals." *Woods disclose in col. 3 lines 55-65, col. 4 line 2-4.*

15. Regarding dependent claim 9, "the method of claim 1 and further comprising processing the first and second electromyogram signals to at least level shift and scale the first and second electromyogram signals." *Woods disclose in col. 3 lines 55-65, col. 4 line 2-4.*

16. Regarding dependent claim 10, "the method of claim 1 and further comprising, in response to sensing at least one of the electromyogram signals, asserting a mouse click." *Woods disclose in col. 5 lines 3-6 and line 9-11.*

17. Regarding dependent claim 11, "the method of claim 10 wherein asserting a mouse click includes asserting a mouse left click." *Woods disclose in col. 5 lines 3-6 and line 9-11. Examiner interprets the control of the mouse to be left, right or movement of the mouse.*

18. Regarding dependent claim 12, "the method of claim 10 wherein asserting a mouse click includes asserting a mouse right click." *Woods disclose in col. 5 lines 3-*

6 and line 9-11. Examiner interprets the control of the mouse to be left, right or movement of the mouse.

19. Regarding dependent claim 13, "the method of claim 1 wherein sensing first electromyogram signals includes sensing first electromyogram signals that at least equal a predetermined threshold." Woods disclose in col. 4 lines 1-7.

20. Claims 14- 20 recite apparatus for performing the method of claims 1-13; therefore they are similar in scope and rejected under the same rationale.

Regarding claims 21 and 22, they are similar in scope to claims 1 and 10 and therefore they are rejected under the same rationale.

### ***Response to Arguments***

21. Applicant's arguments, see pages 8-11 of Amendment A, filed 10/16/03, with respect to claims 1-22 rejection under 35 U.S.C 112, first paragraph have been fully considered and are persuasive. The 35 U.S.C 112 first paragraph rejection of claims 1-22 has been withdrawn.

22. Applicant's arguments filed 10/16/03, with respect to claims 1-22 rejection under 35 U.S.C 102(e) have been fully considered but they are not persuasive.

Applicant argues in Amendment A, filed 10/16/03 "*Wood speaks only of horizontal or vertical motion with respect to that cursor or game piece movement. The applicant, in claim 1, specifies using a first electromyogram signal to establish an angle of directional movement for an on-screen cursor and a second electromyogram signal to move that on-screen cursor in the now determined direction. Since Wood makes no teaching in this*

*regard, Wood cannot be said to anticipate claim 1."*

Wood has disclosed in his invention to move and control an on-screen cursor based on muscle contraction data obtained by using (3 or less) body sensors. Wood disclose in col.6 lines 60-67 "a first body sensor 22 which generates a first output signal that is sent through a wire 24 and a second body sensor 26 which generates a second output signal that is sent through a second wire 28. First and second wires 24 and 26 are coupled to a converter or interface device 30 which outputs a conditioned and digitized or converted signal through a wire 32 to an input port 34 in a computer 36."

Wood disclose in col. 9 lines 11-16 "In some embodiments, two dimensions in movement are used, corresponding to two display dimensions on the screen. In one example, bending and straightening the right forearm toward and away from the shoulder causes horizontal axis cursor movement, and the same movement of the left arm causes vertical axis cursor movement."

Wood disclose in col. 5 line 39-41 "...the relative position of the cursor or gamepiece corresponds to the relative position of the signal within the scale." And in col. 6 line 12-15 Wood disclose " By using two sensor inputs, full screen control of cursor position can be accomplished, enabling play of a game requiring two-dimensional game-piece movement such as Pac Man." In col. 8 lines 64-67 Wood disclose "...muscle contraction or body position near or past a threshold is required to set a gamepiece in motion or keep the gamepiece in motion."

Therefore Wood disclose that the first signal establish the direction of movement



and the second signal to move the cursor in that direction.

Applicant argues in first paragraph of page 12 in line 5-6 “...Wood also suggest a preference for joint-based sensing, and Wood further makes no suggestion that multiple electromyogram signals can be used to establish, respectively, an angle of directional movement for an on-screen cursor and movement of the on-screen cursor in an angle of directional movement as was previously established.”

Wood disclose in col. 9 line 40-41 “The present invention thus requires specific body movements or muscle contraction to play the game.” And in col. 11 line 14-15 and line 19-21 Wood disclose “Contracting the muscles can thus be used to play the game in question. One use of the present invention includes requiring a patient to activate two or more sensors at once to move a gamepiece.”

### **Conclusion**

**23. THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 2672

24. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Faranak Fouladi** whose telephone number is **703-305-3223**. The examiner can normally be reached on Mon-Fri from 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Michael Razavi** can be reach at **703-305-4713**.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

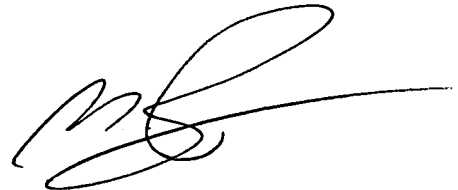
Washington, DC. 20231

**Or faxed to: 703-872-9306 (for Technology Center 2600 only)**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, sixth-floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is 703-306-0377.

**Faranak Fouladi-Semnani**  
**Patent Examiner**  
**Art Unit 2672**



**MICHAEL RAZAVI**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2600**